

ภาคผนวก

Prince of Songkla University  
Pattani Campus

## ภาคผนวก ก

## รายชื่อผู้เชี่ยวชาญตรวจสอบความเที่ยงตรงของเครื่องมือ

- |                                  |         |                                                                  |
|----------------------------------|---------|------------------------------------------------------------------|
| 1. รศ.ดร.ศักดิ์ไทย สุรกิจบวร     | ตำแหน่ง | อาจารย์ประจำคณะครุศาสตร์<br>มหาวิทยาลัยราชภัฏสกลนคร              |
| 2. รศ.ดร.อำภา บุญช่วย            | ตำแหน่ง | ผู้ทรงคุณวุฒิด้านผู้นำทางการศึกษา                                |
| 3. ผศ.ดร.วีรยุทธ ชาติตะกาศอนันต์ | ตำแหน่ง | คณบดีคณะครุศาสตร์<br>มหาวิทยาลัยราชภัฏนครศรีธรรมราช              |
| 4. ดร.เสาวนิตย์ ทวีสันตนิษฐกุล   | ตำแหน่ง | ผู้อำนวยการ โรงเรียนกาบังพิทยาคม<br>อำเภอกาบัง จังหวัดยะลา       |
| 5. ดร.ชวลิต เกิดทิพย์            | ตำแหน่ง | อาจารย์ประจำภาควิชาการบริหารการศึกษา<br>มหาวิทยาลัยสงขลานครินทร์ |

## ภาคผนวก ข



ที่ ศช 0521.2.0702/

ภาควิชาการบริหารการศึกษา  
คณะศึกษาศาสตร์  
มหาวิทยาลัยสงขลานครินทร์  
วิทยาเขตปัตตานี 94000

10 พฤษภาคม 2551

เรื่อง ขอบความอนุเคราะห์ในการเก็บรวบรวมข้อมูลเพื่อการวิจัย

เรียน คณบดี

สิ่งที่ส่งมาด้วย แบบสอบถาม จำนวน 1 ชุด

ด้วยนางจรูณี เก้าเอี้ยน นักศึกษาระดับปริญญาเอก สาขาการบริหารการศึกษา คณะศึกษาศาสตร์ มหาวิทยาลัยสงขลานครินทร์ วิทยาเขตปัตตานี กำลังทำวิทยานิพนธ์ เรื่อง “รูปแบบความสัมพันธ์โครงสร้างเชิงเส้นขององค์ประกอบภาวะผู้นำที่ส่งผลต่อพฤติกรรมการบริหารของคณบดีในมหาวิทยาลัยราชภัฏ” โดยมี รองศาสตราจารย์ ดร.ชุมศักดิ์ อินทร์รักษา เป็นกรรมการที่ปรึกษา รองศาสตราจารย์ ดร.ผ่องศรี วาณิชย์ศุภวงศ์ และผู้ช่วยศาสตราจารย์ ดร.वलันต์ อติศัพท์ เป็นกรรมการที่ปรึกษาร่วม

ทางภาควิชาการบริหารการศึกษาเห็นว่า ท่านเป็นผู้มีประสบการณ์ในการบริหารงานของคณะ ที่สามารถให้ข้อมูลเพื่อให้งานวิจัยครั้งนี้เสร็จสิ้นสมบูรณ์ และนำมาซึ่งองค์ความรู้ใหม่ในการพัฒนาภาวะผู้นำของคณบดีได้เป็นอย่างดี จึงขอความอนุเคราะห์จากท่านในการตอบแบบสอบถามในครั้งนี้

จึงเรียนมาเพื่อโปรดพิจารณาให้ความอนุเคราะห์ดังกล่าวด้วย จักขอบพระคุณยิ่ง

ขอแสดงความนับถือ

(รองศาสตราจารย์ ดร.ชุมศักดิ์ อินทร์รักษา)

หัวหน้าภาควิชาการบริหารการศึกษา

ภาควิชาการบริหารการศึกษา

โทร. 0 7331 3928-50 ต่อ 1624

โทรสาร 0 7334 8322

**ภาคผนวก ค**  
**คุณภาพเครื่องมือ**

ค่าความเที่ยงตรงด้านเนื้อหา (Content Validity) โดยวัดจากค่าดัชนีความสอดคล้องระหว่างข้อคำถามกับประเด็นของเนื้อหา (IC) ตามแบบสอบถาม เรื่อง รูปแบบความสัมพันธ์โครงสร้างเชิงเส้นขององค์ประกอบภาวะผู้นำที่ส่งผลต่อพฤติกรรมกรรมการบริหารของคณะในมหาวิทยาลัยราชภัฏ

ข้อที่	คะแนนการพิจารณาของผู้เชี่ยวชาญ					ผลรวม	
	คนที่ 1	คนที่ 2	คนที่ 3	คนที่ 4	คนที่ 5	R	IC
1.	+1	+1	+1	+1	+1	+5	1.00
2.	+1	+1	0	+1	+1	+5	0.80
3.	+1	+1	+1	+1	+1	+5	1.00
4.	+1	+1	+1	+1	+1	+5	1.00
5.	+1	+1	+1	+1	+1	+5	1.00
6.	+1	+1	+1	+1	+1	+5	1.00
7.	+1	+1	+1	+1	+1	+5	1.00
8.	+1	+1	+1	+1	+1	+5	1.00
9.	+1	+1	+1	+1	+1	+5	1.00
10.	+1	+1	+1	+1	+1	+5	1.00
11.	+1	+1	+1	+1	+1	+5	1.00
12.	+1	+1	+1	+1	+1	+5	1.00
13.	+1	+1	+1	+1	+1	+5	1.00
14.	+1	+1	+1	+1	+1	+5	1.00
15.	+1	+1	+1	+1	+1	+5	1.00
16.	+1	+1	+1	+1	+1	+5	1.00
17.	+1	+1	+1	+1	+1	+5	1.00
18.	+1	+1	+1	+1	+1	+5	1.00
19.	+1	+1	+1	+1	+1	+5	1.00
20.	+1	+1	+1	+1	+1	+5	1.00
21.	+1	+1	+1	+1	+1	+5	1.00

ข้อที่	คะแนนการพิจารณาของผู้เชี่ยวชาญ					ผลรวม	
	คนที่ 1	คนที่ 2	คนที่ 3	คนที่ 4	คนที่ 5	R	IC
22.	+1	+1	+1	+1	+1	+5	1.00
23.	+1	+1	+1	+1	+1	+5	1.00
24.	+1	+1	+1	+1	+1	+5	1.00
25.	+1	+1	+1	+1	+1	+5	1.00
26.	+1	+1	+1	+1	+1	+5	1.00
27.	+1	+1	+1	+1	+1	+5	1.00
28.	+1	+1	+1	+1	0	+4	0.80
29.	+1	+1	+1	+1	+1	+5	1.00
30.	+1	+1	+1	+1	+1	+5	1.00
31.	+1	+1	+1	+1	+1	+5	1.00
32.	+1	+1	+1	+1	+1	+5	1.00
33.	+1	+1	+1	+1	+1	+5	1.00
34.	+1	+1	+1	+1	+1	+5	1.00
35.	+1	+1	+1	+1	+1	+5	1.00
36.	+1	+1	+1	+1	+1	+5	1.00
37.	+1	+1	+1	+1	+1	+5	1.00
38.	+1	+1	+1	+1	+1	+5	1.00
39.	+1	+1	+1	+1	+1	+5	1.00
40.	+1	+1	+1	0	+1	+4	0.80
41.	+1	+1	+1	+1	+1	+5	1.00
42.	+1	+1	+1	+1	+1	+5	1.00
43.	+1	+1	+1	+1	+1	+5	1.00
44.	+1	+1	+1	+1	+1	+5	1.00
45.	+1	+1	+1	0	+1	+4	0.80
46.	+1	+1	+1	+1	+1	+5	1.00
47.	+1	+1	0	+1	+1	+5	1.00
48.	+1	+1	0	+1	+1	+5	1.00

ข้อที่	คะแนนการพิจารณาของผู้เชี่ยวชาญ					ผลรวม	
	คนที่ 1	คนที่ 2	คนที่ 3	คนที่ 4	คนที่ 5	R	IC
49.	+1	+1	+1	+1	+1	+5	1.00
50.	+1	+1	+1	+1	+1	+5	1.00
51.	+1	+1	+1	+1	+1	+5	1.00
52.	+1	+1	+1	+1	+1	+5	1.00
53.	+1	+1	+1	+1	+1	+5	1.00
54.	+1	+1	+1	+1	+1	+5	1.00
55.	+1	+1	+1	+1	+1	+5	0.80
56.	+1	+1	+1	+1	+1	+5	1.00
57.	+1	+1	+1	+1	+1	+5	1.00
58.	+1	+1	+1	+1	+1	+5	1.00
59.	+1	+1	0	+1	+1	+5	0.80
60.	+1	+1	+1	+1	+1	+5	1.00
61.	+1	+1	+1	+1	+1	+5	1.00
62.	+1	+1	+1	+1	+1	+5	1.00
63.	+1	+1	+1	+1	+1	+5	1.00
64.	+1	+1	+1	+1	+1	+5	1.00
65.	+1	+1	+1	+1	+1	+5	1.00
66.	+1	+1	+1	+1	+1	+5	1.00
67.	+1	+1	+1	+1	+1	+5	0.80
68.	+1	+1	+1	+1	+1	+5	1.00
69.	+1	+1	+1	+1	+1	+5	1.00
70.	+1	+1	+1	+1	+1	+5	1.00
71.	+1	+1	+1	+1	+1	+5	1.00
72.	+1	+1	+1	+1	+1	+5	0.80
73.	+1	+1	+1	+1	+1	+5	1.00
74.	+1	+1	+1	+1	+1	+5	1.00
75.	+1	+1	+1	+1	+1	+5	1.00

ข้อที่	คะแนนการพิจารณาของผู้เชี่ยวชาญ					ผลรวม	
	คนที่ 1	คนที่ 2	คนที่ 3	คนที่ 4	คนที่ 5	R	IC
76.	+1	+1	+1	+1	+1	+5	1.00
77.	+1	+1	+1	+1	+1	+5	1.00
78.	+1	+1	+1	+1	+1	+5	1.00
79.	+1	+1	+1	+1	+1	+5	1.00
80.	+1	+1	+1	+1	+1	+5	1.00
81.	+1	+1	+1	+1	+1	+5	1.00
82.	+1	+1	+1	+1	+1	+5	0.80
83.	+1	+1	+1	+1	+1	+5	1.00
84.	+1	+1	+1	+1	+1	+5	1.00
85.	+1	+1	+1	+1	+1	+5	1.00
86.	+1	+1	+1	+1	+1	+5	1.00
87.	+1	+1	+1	+1	+1	+5	1.00
88.	+1	+1	+1	+1	+1	+5	1.00
89.	+1	+1	+1	+1	+1	+5	1.00
90.	+1	+1	+1	+1	+1	+5	1.00
91.	+1	+1	+1	+1	+1	+5	1.00
92.	+1	+1	+1	+1	+1	+5	1.00
93.	+1	+1	+1	+1	+1	+5	1.00
94.	+1	+1	+1	+1	+1	+5	0.80
95.	+1	+1	+1	+1	+1	+5	1.00
96.	+1	+1	+1	+1	+1	+5	1.00
97.	+1	+1	+1	+1	+1	+5	1.00
98.	+1	+1	+1	+1	+1	+5	1.00
99.	+1	+1	+1	+1	+1	+5	0.80
100.	+1	+1	+1	+1	+1	+5	1.00
101.	+1	+1	+1	+1	+1	+5	1.00
102.	+1	+1	+1	+1	+1	+5	1.00

ข้อที่	คะแนนการพิจารณาของผู้เชี่ยวชาญ					ผลรวม	
	คนที่ 1	คนที่ 2	คนที่ 3	คนที่ 4	คนที่ 5	R	IC
103.	+1	+1	+1	+1	+1	+5	1.00
104.	+1	+1	+1	+1	+1	+5	1.00
105.	+1	+1	+1	+1	+1	+5	1.00
106.	+1	+1	+1	+1	+1	+5	1.00
107.	+1	+1	+1	+1	+1	+5	1.00
108.	+1	+1	+1	+1	+1	+5	1.00
109.	+1	+1	+1	+1	+1	+5	0.80
110.	+1	+1	+1	+1	+1	+5	1.00
111.	+1	+1	+1	+1	+1	+5	1.00
112.	+1	+1	+1	+1	+1	+5	1.00
113.	+1	+1	+1	+1	+1	+5	1.00
114.	+1	+1	+1	+1	+1	+5	1.00
115.	+1	+1	+1	+1	+1	+5	1.00
116.	+1	+1	+1	+1	+1	+5	1.00
117.	+1	+1	+1	+1	+1	+5	1.00
118.	+1	+1	+1	+1	+1	+5	1.00
119.	+1	+1	+1	+1	+1	+5	1.00
120.	+1	+1	+1	+1	+1	+5	1.00
121.	+1	+1	+1	+1	+1	+5	0.80
122.	+1	+1	+1	+1	+1	+5	1.00
123.	+1	+1	+1	+1	+1	+5	1.00
124.	+1	+1	+1	+1	+1	+5	1.00
125.	+1	+1	+1	+1	+1	+5	1.00
126.	+1	+1	+1	+1	+1	+5	0.80
127.	+1	+1	+1	+1	+1	+5	1.00
128.	+1	+1	+1	+1	+1	+5	1.00
129.	+1	+1	+1	+1	+1	+5	1.00



ข้อที่	คะแนนการพิจารณาของผู้เชี่ยวชาญ					ผลรวม	
	คนที่ 1	คนที่ 2	คนที่ 3	คนที่ 4	คนที่ 5	R	IC
130.	+1	+1	+1	+1	+1	+5	1.00
131.	+1	+1	+1	+1	+1	+5	1.00
132.	+1	+1	+1	+1	+1	+5	1.00
133.	+1	+1	+1	+1	+1	+5	1.00
134.	+1	+1	+1	+1	+1	+5	1.00
135.	+1	+1	+1	+1	+1	+5	1.00
136.	+1	+1	+1	+1	+1	+5	0.80
137.	+1	+1	+1	+1	+1	+5	1.00
138.	+1	+1	+1	+1	+1	+5	1.00
139.	+1	+1	+1	+1	+1	+5	1.00
140.	+1	+1	+1	+1	+1	+5	1.00
141.	+1	+1	+1	+1	+1	+5	1.00
142.	+1	+1	+1	+1	+1	+5	1.00
143.	+1	+1	+1	+1	+1	+5	1.00
144.	+1	+1	+1	+1	+1	+5	1.00
145.	+1	+1	+1	+1	+1	+5	1.00
146.	+1	+1	+1	+1	+1	+5	1.00
147.	+1	+1	+1	+1	+1	+5	1.00
148.	+1	+1	+1	+1	+1	+5	0.80
149.	+1	+1	+1	+1	+1	+5	1.00
150.	+1	+1	+1	+1	+1	+5	1.00
151.	+1	+1	+1	+1	+1	+5	1.00
152.	+1	+1	+1	+1	+1	+5	1.00
153.	+1	+1	+1	+1	+1	+5	0.80
154.	+1	+1	+1	+1	+1	+5	1.00
155.	+1	+1	+1	+1	+1	+5	1.00
156.	+1	+1	+1	+1	+1	+5	1.00

ข้อที่	คะแนนการพิจารณาของผู้เชี่ยวชาญ					ผลรวม	
	คนที่ 1	คนที่ 2	คนที่ 3	คนที่ 4	คนที่ 5	R	IC
157.	+1	+1	+1	+1	+1	+5	1.00
158.	+1	+1	+1	+1	+1	+5	1.00
159.	+1	+1	+1	+1	+1	+5	1.00
160.	+1	+1	+1	+1	+1	+5	1.00
161.	+1	+1	+1	+1	+1	+5	1.00
162.	+1	+1	+1	+1	+1	+5	1.00
163.	+1	+1	+1	+1	+1	+5	0.80
164.	+1	+1	+1	+1	+1	+5	1.00
165.	+1	+1	+1	+1	+1	+5	1.00
166.	+1	+1	+1	+1	+1	+5	1.00
167.	+1	+1	+1	+1	+1	+5	1.00
168.	+1	+1	+1	+1	+1	+5	1.00
169.	+1	+1	+1	+1	+1	+5	1.00
170.	+1	+1	+1	+1	+1	+5	1.00
171.	+1	+1	+1	+1	+1	+5	1.00
172.	+1	+1	+1	+1	+1	+5	1.00
173.	+1	+1	+1	+1	+1	+5	1.00
174.	+1	+1	+1	+1	+1	+5	1.00
175.	+1	+1	+1	+1	+1	+5	0.80
176.	+1	+1	+1	+1	+1	+5	1.00
177.	+1	+1	+1	+1	+1	+5	1.00
178.	+1	+1	+1	+1	+1	+5	1.00
179.	+1	+1	+1	+1	+1	+5	1.00
180.	+1	+1	+1	+1	+1	+5	0.80
181.	+1	+1	+1	+1	+1	+5	1.00
182.	+1	+1	+1	+1	+1	+5	1.00
183.	+1	+1	+1	+1	+1	+5	1.00

ข้อที่	คะแนนการพิจารณาของผู้เชี่ยวชาญ					ผลรวม	
	คนที่ 1	คนที่ 2	คนที่ 3	คนที่ 4	คนที่ 5	R	IC
184.	+1	+1	+1	+1	+1	+5	1.00
185.	+1	+1	+1	+1	+1	+5	1.00
186.	+1	+1	+1	+1	+1	+5	1.00
187.	+1	+1	+1	+1	+1	+5	1.00
188.	+1	+1	+1	+1	+1	+5	1.00
189.	+1	+1	+1	+1	+1	+5	1.00
190.	+1	+1	+1	+1	+1	+5	0.80
191.	+1	+1	+1	+1	+1	+5	1.00
192.	+1	+1	+1	+1	+1	+5	1.00
193.	+1	+1	+1	+1	+1	+5	1.00
194.	+1	+1	+1	+1	+1	+4	0.80
195.	+1	+1	+1	+1	+1	+5	1.00
196.	+1	+1	+1	+1	+1	+5	1.00
197.	+1	+1	+1	+1	+1	+5	1.00
198.	+1	+1	+1	+1	+1	+5	1.00
199.	+1	+1	+1	+1	+1	+5	1.00

## ภาคผนวก ง

แบบสอบถามเกี่ยวกับรูปแบบความสัมพันธ์โครงสร้างเชิงเส้นขององค์ประกอบภาวะผู้นำที่ส่งผลต่อพฤติกรรมกรรมการบริหารของคณะดีในมหาวิทยาลัยราชภัฏ มีค่าความเชื่อมั่นในแต่ละด้านดังนี้

1. ด้านภาวะผู้นำ	ค่าความเชื่อมั่น .945
2. ด้านผู้บริหารมืออาชีพ	ค่าความเชื่อมั่น .837
3. ด้านอาจในตำแหน่ง	ค่าความเชื่อมั่น .918
4. ด้านมาตรฐานวิชาชีพและจรรยาบรรณวิชาชีพ	ค่าความเชื่อมั่น .961
5. ด้านสถานการณ์ในคณะ	ค่าความเชื่อมั่น .839
6. ด้านพฤติกรรมกรรมการบริหาร	ค่าความเชื่อมั่น .940
ค่าความเชื่อมั่นของแบบสอบถามทั้งฉบับ	ค่าความเชื่อมั่น .906

Prince of Songkla University  
Pattani Campus

## ผลการวิเคราะห์ข้อมูล

DATE: 8/18/2009  
TIME: 10:56

L I S R E L 8.72

BY

Karl G. Jöreskog & Dag Sörbom

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The following lines were read from file C:\newpath\JA3.LPJ:

```

TI new path
!DA NI=24 NO=500 MA=CM
SY='C:\newpath\JA3.DSF'
SE
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 1 2
3 4 5 6 7 8 /
MO NX=8 NY=16 NK=2 NE=4 BE=FU GA=FI PS=SY TE=SY TD=SY
LE
aut standmor sit bch
LK
lead pro
FR LY(1,1) LY(1,4) LY(2,4) LY(3,1) LY(3,2) LY(4,1) LY(5,2) LY(5,4) LY(6,2)
FR LY(6,4) LY(7,2) LY(7,3) LY(7,4) LY(8,1) LY(8,2) LY(8,3) LY(8,4) LY(9,1)
FR LY(9,2) LY(9,4) LY(10,2) LY(10,3) LY(10,4) LY(11,3) LY(11,4) LY(12,3) LY(12,4)
FR LY(13,3) LY(13,4) LY(14,2) LY(14,3) LY(15,1) LY(15,2) LY(15,4) LY(16,2) LY(16,4)
FR LX(1,2) LX(2,1) LX(2,2) LX(3,1) LX(3,2) LX(4,1) LX(4,2) LX(5,1) LX(6,2)
FR LX(7,2) LX(8,1) LX(8,2) BE(3,1) BE(4,1) BE(4,2) BE(4,3) GA(1,1) GA(2,2)
FR GA(3,1) GA(4,1) GA(4,2) TE(2,1) TE(3,1) TE(3,2) TE(4,1) TE(4,2) TE(5,1)
FR TE(5,2) TE(5,4) TE(6,1) TE(6,2) TE(6,4) TE(6,5) TE(7,1) TE(7,2) TE(7,6)
FR TE(8,1) TE(8,2) TE(8,3) TE(8,6) TE(9,1) TE(9,2) TE(9,3) TE(9,5) TE(9,7)
FR TE(9,8) TE(10,1) TE(10,2) TE(10,3) TE(10,8) TE(10,9) TE(11,1) TE(11,2) TE(11,3)
FR TE(11,8) TE(11,10) TE(12,1) TE(12,2) TE(12,3) TE(12,4) TE(12,8) TE(13,1) TE(13,2)
FR TE(13,4) TE(13,7) TE(13,10) TE(13,12) TE(14,1) TE(14,2) TE(14,4) TE(14,5) TE(14,6)
FR TE(14,8) TE(14,12) TE(15,1) TE(15,2) TE(15,4) TE(15,8) TE(15,9) TE(15,11)
TE(15,12)
FR TE(15,14) TE(16,1) TE(16,2) TE(16,6) TE(16,7) TE(16,10) TD(2,1) TD(3,1) TD(4,1)
FR TD(4,3) TD(5,2) TD(5,3) TD(5,4) TD(6,5) TD(7,1) TD(7,3) TD(7,4) TD(7,6)
FR TD(8,2) TD(8,5) TD(8,7)
VA 0.67 LY(2,1)
VA 1 LY(4,2)
VA 1 LY(9,3)
VA 1 LY(14,4)
VA 1 LX(1,1)
VA 1 LX(5,2)
PD
OU AM RS EF FS SS SC AD=OFF

TI new path

Number of Input Variables 24
Number of Y - Variables 16
Number of X - Variables 8
Number of ETA - Variables 4
Number of KSI - Variables 2
Number of Observations 500

```

TI new path

## Covariance Matrix

	Y1	Y2	Y3	Y4	Y5	Y6
Y1	1.00					
Y2	0.90	1.00				
Y3	0.68	0.68	1.00			
Y4	0.40	0.39	0.61	1.00		
Y5	0.48	0.43	0.66	0.76	1.00	
Y6	0.54	0.51	0.68	0.61	0.74	1.00
Y7	0.46	0.46	0.64	0.64	0.76	0.85
Y8	0.52	0.50	0.50	0.55	0.63	0.60
Y9	0.63	0.66	0.63	0.52	0.55	0.69
Y10	0.67	0.62	0.67	0.53	0.61	0.64
Y11	0.56	0.54	0.56	0.53	0.60	0.60
Y12	0.47	0.45	0.54	0.55	0.55	0.53
Y13	0.44	0.42	0.58	0.57	0.58	0.50
Y14	0.43	0.41	0.62	0.49	0.55	0.51
Y15	0.56	0.56	0.82	0.69	0.69	0.66
Y16	0.53	0.51	0.71	0.69	0.82	0.94
X1	0.42	0.40	0.71	0.73	0.69	0.56
X2	0.43	0.40	0.68	0.58	0.64	0.58
X3	0.42	0.42	0.65	0.70	0.64	0.56
X4	0.47	0.47	0.67	0.70	0.65	0.64
X5	0.50	0.43	0.58	0.58	0.63	0.57
X6	0.73	0.69	0.72	0.62	0.61	0.63
X7	0.63	0.63	0.69	0.60	0.64	0.67
X8	0.68	0.67	0.77	0.67	0.69	0.69

## Covariance Matrix

	Y7	Y8	Y9	Y10	Y11	Y12
Y7	1.00					
Y8	0.69	1.00				
Y9	0.62	0.63	1.00			
Y10	0.63	0.74	0.74	1.00		
Y11	0.61	0.72	0.61	0.81	1.00	
Y12	0.52	0.58	0.54	0.66	0.71	1.00
Y13	0.53	0.56	0.49	0.65	0.66	0.72
Y14	0.48	0.47	0.38	0.50	0.48	0.41
Y15	0.64	0.58	0.56	0.68	0.65	0.58
Y16	0.96	0.72	0.69	0.69	0.65	0.57
X1	0.57	0.51	0.46	0.54	0.52	0.51
X2	0.56	0.50	0.45	0.55	0.48	0.45
X3	0.57	0.49	0.44	0.52	0.48	0.50
X4	0.63	0.55	0.50	0.56	0.54	0.54
X5	0.53	0.46	0.39	0.49	0.51	0.45
X6	0.57	0.57	0.60	0.66	0.63	0.54
X7	0.61	0.61	0.57	0.63	0.66	0.56
X8	0.66	0.57	0.61	0.67	0.62	0.54

## Covariance Matrix

	Y13	Y14	Y15	Y16	X1	X2
Y13	1.00					
Y14	0.64	1.00				
Y15	0.70	0.75	1.00			
Y16	0.58	0.56	0.72	1.00		
X1	0.73	0.81	0.81	0.65	1.00	
X2	0.67	0.93	0.83	0.65	0.87	1.00
X3	0.60	0.79	0.78	0.65	0.80	0.78
X4	0.63	0.70	0.81	0.71	0.78	0.74
X5	0.57	0.73	0.76	0.61	0.69	0.75
X6	0.63	0.69	0.86	0.65	0.70	0.69
X7	0.62	0.71	0.90	0.70	0.67	0.73
X8	0.61	0.68	0.83	0.73	0.70	0.73

## Covariance Matrix

	X3	X4	X5	X6	X7	X8
X3	1.00					
X4	0.79	1.00				
X5	0.72	0.75	1.00			
X6	0.69	0.75	0.77	1.00		
X7	0.69	0.75	0.75	0.86	1.00	
X8	0.70	0.73	0.75	0.82	0.81	1.00

TI new path

Parameter Specifications

LAMBDA-Y

	aut	standmor	sit	bch
Y1	1	0	0	2
Y2	0	0	0	3
Y3	4	5	0	0
Y4	6	0	0	0
Y5	0	7	0	8
Y6	0	9	0	10
Y7	0	11	12	13
Y8	14	15	16	17
Y9	18	19	0	20
Y10	0	21	22	23
Y11	0	0	24	25
Y12	0	0	26	27
Y13	0	0	28	29
Y14	0	30	31	0
Y15	32	33	0	34
Y16	0	35	0	36

LAMBDA-X

	lead	pro
X1	0	37
X2	38	39
X3	40	41
X4	42	43
X5	44	0
X6	0	45
X7	0	46
X8	47	48

BETA

	aut	standmor	sit	bch
aut	0	0	0	0
standmor	0	0	0	0
sit	49	0	0	0
bch	50	51	52	0

GAMMA

	lead	pro
aut	53	0
standmor	0	54
sit	55	0
bch	56	57

PHI

	lead	pro
lead	58	
pro	59	60

## PSI

aut	standmor	sit	bch
-----	-----	-----	-----
61	62	63	64

## THETA-EPS

	Y1	Y2	Y3	Y4	Y5	Y6
	-----	-----	-----	-----	-----	-----
Y1	65					
Y2	66	67				
Y3	68	69	70			
Y4	71	72	0	73		
Y5	74	75	0	76	77	
Y6	78	79	0	80	81	82
Y7	83	84	0	0	0	85
Y8	87	88	89	0	0	90
Y9	92	93	94	0	95	0
Y10	99	100	101	0	0	0
Y11	105	106	107	0	0	0
Y12	111	112	113	114	0	0
Y13	117	118	0	119	0	0
Y14	124	125	0	126	127	128
Y15	132	133	0	134	0	0
Y16	141	142	0	0	0	143

## THETA-EPS

	Y7	Y8	Y9	Y10	Y11	Y12
	-----	-----	-----	-----	-----	-----
Y7	86					
Y8	0	91				
Y9	96	97	98			
Y10	0	102	103	104		
Y11	0	108	0	109	110	
Y12	0	115	0	0	0	116
Y13	120	0	0	121	0	122
Y14	0	129	0	0	0	130
Y15	0	135	136	0	137	138
Y16	144	0	0	145	0	0

## THETA-EPS

	Y13	Y14	Y15	Y16
	-----	-----	-----	-----
Y13	123			
Y14	0	131		
Y15	0	139	140	
Y16	0	0	0	146

## THETA-DELTA

	X1	X2	X3	X4	X5	X6
	-----	-----	-----	-----	-----	-----
X1	147					
X2	148	149				
X3	150	0	151			
X4	152	0	153	154		
X5	0	155	156	157	158	
X6	0	0	0	0	159	160
X7	161	0	162	163	0	164
X8	0	166	0	0	167	0

## THETA-DELTA

	X7	X8
	-----	-----
X7	165	
X8	168	169



TI new path

Number of Iterations =\*\*\*

LISREL Estimates (Maximum Likelihood)

LAMBDA-Y				
	aut	standmor	sit	bch
	-----	-----	-----	-----
Y1	0.64 (0.03) 21.60	- -	- -	-0.84 (0.12) -7.22
Y2	0.67	- -	- -	-0.91 (0.12) -7.68
Y3	0.15 (0.04) 4.08	0.69 (0.14) 4.88	- -	- -
Y4	0.12 (0.03) 4.00	1.00	- -	- -
Y5	- -	1.93 (0.25) 7.66	- -	0.17 (0.05) 3.70
Y6	- -	3.42 (0.58) 5.94	- -	0.08 (0.03) 2.44
Y7	- -	2.71 (0.44) 6.13	0.17 (0.07) 2.43	0.04 (0.05) 0.82
Y8	0.01 (0.03) 0.36	1.26 (0.23) 5.41	0.99 (0.19) 5.24	-0.25 (0.09) -2.66
Y9	0.09 (0.03) 2.71	1.07 (0.22) 4.92	1.00	-0.39 (0.09) -4.25
Y10	- -	0.52 (0.13) 4.07	1.28 (0.22) 5.80	-0.29 (0.08) -3.58
Y11	- -	- -	2.06 (0.35) 5.92	-0.58 (0.10) -5.76
Y12	- -	- -	1.51 (0.29) 5.24	-0.38 (0.09) -4.33
Y13	- -	- -	0.31 (0.23) 1.34	0.15 (0.06) 2.32
Y14	- -	0.30 (0.23) 1.31	-1.74 (0.36) -4.87	1.00
Y15	0.30 (0.06) 4.64	-0.20 (0.09) -2.40	- -	-0.13 (0.07) -2.04
Y16	- -	2.75 (0.44)	- -	0.14 (0.04)

6.29

3.46

## LAMBDA-X

	lead	pro
	-----	-----
X1	1.00	-22.91 (90.33) -0.25
X2	1.20 (0.05) 22.04	-32.54 (127.78) -0.25
X3	0.92 (0.06) 16.30	-19.25 (76.54) -0.25
X4	0.56 (0.05) 11.11	0.08 (3.66) 0.02
X5	0.52 (0.06) 8.98	1.00
X6	- -	31.67 (119.90) 0.26
X7	- -	32.51 (123.12) 0.26
X8	0.18 (0.05) 3.61	21.39 (80.25) 0.27

## BETA

	aut	standmor	sit	bch
	-----	-----	-----	-----
aut	- -	- -	- -	- -
standmor	- -	- -	- -	- -
sit	0.20 (0.07) 3.00	- -	- -	- -
bch	-0.20 (0.07) -2.77	-0.81 (0.23) -3.56	1.78 (0.38) 4.68	- -

## GAMMA

	lead	pro
	-----	-----
aut	3.04 (0.87) 3.49	- -
standmor	- -	5.04 (19.10) 0.26
sit	0.09 (0.18) 0.52	- -

bch	2.13	-48.11
	(0.23)	(187.87)
	9.13	-0.26

## Covariance Matrix of ETA and KSI

	aut	standmor	sit	bch	lead	pro
aut	22.26					
standmor	0.65	0.07				
sit	5.18	0.15	1.46			
bch	12.62	0.32	3.40	8.24		
lead	6.82	0.21	1.60	4.06	2.24	
pro	0.13	0.00	0.03	0.07	0.04	0.00

## PHI

	lead	pro
lead	2.24 (0.49) 4.53	
pro	0.04 (0.16) 0.27	0.00 (0.01) 0.13

## PSI

Note: This matrix is diagonal.

aut	standmor	sit	bch
1.51 (0.79)	0.05 (0.01)	0.25 (0.14)	-0.21 (0.04)
1.90	3.43	1.80	-5.84

## Squared Multiple Correlations for Structural Equations

aut	standmor	sit	bch
0.93	0.30	0.83	1.03

## Squared Multiple Correlations for Reduced Form

aut	standmor	sit	bch
0.93	0.30	0.79	0.92

## Reduced Form

	lead	pro
aut	3.04 (0.87) 3.49	- -
standmor	- -	5.04 (19.10) 0.26
sit	0.71 (0.26) 2.80	- -
bch	2.80 (0.53) 5.32	-52.17 (203.35) -0.26

## THETA-EPS

	Y1	Y2	Y3	Y4	Y5	Y6
Y1	-0.34 (0.41) -0.82					
Y2	-0.49 (0.44) -1.12	-0.45 (0.47) -0.95				
Y3	0.05 (0.04) 1.28	0.05 (0.04) 1.35	0.31 (0.02) 15.20			
Y4	-0.14 (0.03) -4.74	-0.15 (0.03) -5.03	--	0.41 (0.03) 14.80		
Y5	0.05 (0.05) 0.91	0.01 (0.06) 0.14	--	0.14 (0.02) 7.30	0.28 (0.02) 12.48	
Y6	-0.02 (0.05) -0.41	-0.06 (0.05) -1.12	--	-0.06 (0.01) -5.43	-0.08 (0.01) -5.86	-0.08 (0.07) -1.09
Y7	-0.01 (0.05) -0.19	-0.01 (0.06) -0.15	--	--	--	-0.09 (0.05) -1.87
Y8	0.15 (0.09) 1.72	0.14 (0.09) 1.51	-0.10 (0.02) -5.63	--	--	-0.11 (0.01) -8.81
Y9	0.15 (0.06) 2.27	0.17 (0.07) 2.47	0.05 (0.02) 2.74	--	-0.04 (0.01) -3.03	--
Y10	0.34 (0.09) 3.72	0.31 (0.10) 3.16	0.06 (0.02) 3.64	--	--	--
Y11	0.29 (0.12) 2.53	0.29 (0.12) 2.32	-0.05 (0.02) -2.80	--	--	--
Y12	0.22 (0.09) 2.36	0.23 (0.10) 2.23	0.00 (0.02) 0.10	0.07 (0.02) 3.57	--	--
Y13	0.16 (0.07) 2.44	0.17 (0.07) 2.30	--	0.03 (0.02) 1.84	--	--
Y14	0.07 (0.03) 2.54	0.07 (0.03) 2.31	--	-0.08 (0.01) -6.81	-0.02 (0.01) -2.18	0.05 (0.01) 6.82
Y15	-0.31 (0.07) -4.41	-0.32 (0.07) -4.33	--	-0.04 (0.01) -3.38	--	--
Y16	0.01 (0.05) 0.22	0.00 (0.05) -0.03	--	--	--	-0.06 (0.05) -1.22
THETA-EPS						
	Y7	Y8	Y9	Y10	Y11	Y12
Y7	0.15					

		(0.04)				
		3.88				
Y8	- -	0.39				
		(0.03)				
		12.34				
Y9	-0.02	0.05	0.43			
	(0.01)	(0.02)	(0.03)			
	-3.11	2.44	14.34			
Y10	- -	0.11	0.16	0.30		
		(0.02)	(0.02)	(0.03)		
		4.62	8.57	11.36		
Y11	- -	0.06	- -	0.06	0.16	
		(0.03)		(0.02)	(0.03)	
		2.22		2.94	5.26	
Y12	- -	0.00	- -	- -	- -	0.39
		(0.02)				(0.03)
		0.12				12.36
Y13	0.01	- -	- -	0.02	- -	0.14
	(0.01)			(0.01)		(0.02)
	1.91			1.91		6.27
Y14	- -	0.02	- -	- -	- -	-0.04
		(0.01)				(0.01)
		2.60				-4.12
Y15	- -	-0.05	-0.08	- -	-0.04	-0.02
		(0.02)	(0.02)		(0.01)	(0.01)
		-3.28	-4.43		-3.78	-2.20
Y16	0.06	- -	- -	0.01	- -	- -
	(0.03)			(0.00)		
	1.66			3.36		

THETA-EPS

	Y13	Y14	Y15	Y16
Y13	----- 0.36 (0.03) 14.14			
Y14	- -	0.15 (0.02) 9.00		
Y15	- -	-0.03 (0.01) -2.31	-0.04 (0.02) -1.74	
Y16	- -	- -	- -	0.04 (0.03) 1.36

Squared Multiple Correlations for Y - Variables

Y1	Y2	Y3	Y4	Y5	Y6
-----	-----	-----	-----	-----	-----
1.35	1.46	0.69	0.58	0.72	1.08

Squared Multiple Correlations for Y - Variables

Y7	Y8	Y9	Y10	Y11	Y12
-----	-----	-----	-----	-----	-----
0.85	0.62	0.56	0.70	0.84	0.61

## Squared Multiple Correlations for Y - Variables

Y13	Y14	Y15	Y16
0.64	0.85	1.04	0.96

## THETA-DELTA

	X1	X2	X3	X4	X5	X6
X1	0.24 (0.01) 17.04					
X2	0.06 (0.01) 7.23	0.14 (0.01) 11.89				
X3	0.06 (0.01) 5.73	--	0.28 (0.02) 15.63			
X4	0.06 (0.01) 5.50	--	0.09 (0.01) 6.60	0.29 (0.02) 16.03		
X5	--	0.04 (0.01) 4.82	0.05 (0.01) 3.68	0.07 (0.01) 5.15	0.35 (0.02) 15.99	
X6	--	--	--	--	0.05 (0.01) 4.43	0.12 (0.01) 10.04
X7	-0.06 (0.01) -7.20	--	-0.02 (0.01) -2.84	-0.02 (0.01) -2.69	--	-0.04 (0.01) -3.41
X8	--	0.02 (0.01) 3.30	--	--	0.05 (0.01) 4.03	--

## THETA-DELTA

	X7	X8
X7	0.08 (0.01) 6.23	
X8	-0.04 (0.01) -4.49	0.21 (0.02) 13.93

## Squared Multiple Correlations for X - Variables

X1	X2	X3	X4	X5	X6
0.76	0.86	0.72	0.71	0.65	0.88

## Squared Multiple Correlations for X - Variables

X7	X8
0.92	0.79

## Goodness of Fit Statistics

Degrees of Freedom = 131  
Minimum Fit Function Chi-Square = 705.82 (P = 0.0)

Normal Theory Weighted Least Squares Chi-Square = 605.74 (P = 0.0)  
 Estimated Non-centrality Parameter (NCP) = 474.74  
 90 Percent Confidence Interval for NCP = (402.00 ; 555.00)

Minimum Fit Function Value = 1.41  
 Population Discrepancy Function Value (F0) = 0.95  
 90 Percent Confidence Interval for F0 = (0.81 ; 1.11)  
 Root Mean Square Error of Approximation (RMSEA) = 0.085  
 90 Percent Confidence Interval for RMSEA = (0.078 ; 0.092)  
 P-Value for Test of Close Fit (RMSEA < 0.05) = 0.00

Expected Cross-Validation Index (ECVI) = 1.89  
 90 Percent Confidence Interval for ECVI = (1.75 ; 2.05)  
 ECVI for Saturated Model = 1.20  
 ECVI for Independence Model = 110.47

Chi-Square for Independence Model with 276 Degrees of Freedom = 55076.19  
 Independence AIC = 55124.19  
 Model AIC = 943.74  
 Saturated AIC = 600.00  
 Independence CAIC = 55249.34  
 Model CAIC = 1825.01  
 Saturated CAIC = 2164.38

Normed Fit Index (NFI) = 0.99  
 Non-Normed Fit Index (NNFI) = 0.98  
 Parsimony Normed Fit Index (PNFI) = 0.47  
 Comparative Fit Index (CFI) = 0.99  
 Incremental Fit Index (IFI) = 0.99  
 Relative Fit Index (RFI) = 0.97

Critical N (CN) = 122.29

Root Mean Square Residual (RMR) = 0.026  
 Standardized RMR = 0.026  
 Goodness of Fit Index (GFI) = 0.91  
 Adjusted Goodness of Fit Index (AGFI) = 0.80  
 Parsimony Goodness of Fit Index (PGFI) = 0.40

TI new path

Fitted Covariance Matrix

	Y1	Y2	Y3	Y4	Y5	Y6
Y1	0.98					
Y2	0.88	0.98				
Y3	0.67	0.68	1.00			
Y4	0.43	0.42	0.63	1.00		
Y5	0.49	0.45	0.65	0.75	1.00	
Y6	0.54	0.50	0.67	0.61	0.74	1.00
Y7	0.48	0.48	0.64	0.63	0.76	0.86
Y8	0.52	0.50	0.48	0.55	0.64	0.61
Y9	0.63	0.65	0.62	0.54	0.56	0.69
Y10	0.66	0.61	0.67	0.56	0.63	0.64
Y11	0.56	0.53	0.55	0.55	0.62	0.60
Y12	0.47	0.45	0.54	0.55	0.54	0.52
Y13	0.46	0.44	0.60	0.56	0.57	0.50
Y14	0.44	0.41	0.63	0.47	0.54	0.51
Y15	0.56	0.55	0.82	0.69	0.69	0.65
Y16	0.54	0.52	0.71	0.69	0.81	0.94
X1	0.44	0.42	0.67	0.60	0.62	0.57
X2	0.42	0.40	0.69	0.62	0.64	0.58
X3	0.44	0.42	0.65	0.58	0.61	0.56
X4	0.51	0.50	0.67	0.60	0.61	0.58
X5	0.49	0.48	0.64	0.58	0.59	0.56
X6	0.65	0.65	0.71	0.65	0.65	0.65
X7	0.67	0.66	0.73	0.66	0.67	0.67
X8	0.60	0.59	0.69	0.62	0.63	0.62

Fitted Covariance Matrix

	Y7	Y8	Y9	Y10	Y11	Y12
Y7	1.00					
Y8	0.68	1.01				
Y9	0.62	0.64	1.00			
Y10	0.63	0.75	0.75	1.00		
Y11	0.61	0.73	0.61	0.82	1.00	
Y12	0.53	0.58	0.52	0.65	0.72	1.00
Y13	0.53	0.55	0.49	0.65	0.66	0.73
Y14	0.47	0.47	0.40	0.51	0.47	0.41
Y15	0.64	0.57	0.55	0.68	0.64	0.59
Y16	0.96	0.73	0.68	0.69	0.66	0.57
X1	0.56	0.49	0.45	0.54	0.49	0.46
X2	0.57	0.50	0.45	0.54	0.49	0.47
X3	0.55	0.49	0.45	0.53	0.48	0.46
X4	0.57	0.52	0.49	0.56	0.54	0.49
X5	0.55	0.50	0.47	0.54	0.52	0.48
X6	0.63	0.60	0.58	0.64	0.64	0.57
X7	0.65	0.62	0.60	0.66	0.66	0.59
X8	0.61	0.57	0.55	0.61	0.60	0.54

## Fitted Covariance Matrix

	Y13	Y14	Y15	Y16	X1	X2
Y13	1.00					
Y14	0.64	1.01				
Y15	0.71	0.75	1.00			
Y16	0.58	0.56	0.72	1.00		
X1	0.64	0.85	0.80	0.64	1.00	
X2	0.67	0.92	0.83	0.66	0.87	1.00
X3	0.63	0.82	0.79	0.63	0.80	0.78
X4	0.62	0.75	0.81	0.64	0.78	0.74
X5	0.60	0.72	0.78	0.62	0.69	0.75
X6	0.64	0.67	0.87	0.70	0.70	0.71
X7	0.66	0.69	0.89	0.72	0.66	0.73
X8	0.63	0.69	0.84	0.67	0.70	0.73

## Fitted Covariance Matrix

	X3	X4	X5	X6	X7	X8
X3	1.00					
X4	0.79	1.00				
X5	0.72	0.75	1.00			
X6	0.69	0.75	0.77	1.00		
X7	0.69	0.75	0.74	0.86	1.00	
X8	0.69	0.73	0.75	0.83	0.80	1.00

## Fitted Residuals

	Y1	Y2	Y3	Y4	Y5	Y6
Y1	0.02					
Y2	0.02	0.02				
Y3	0.01	0.01	0.00			
Y4	-0.03	-0.03	-0.02	0.00		
Y5	-0.01	-0.01	0.01	0.01	0.00	
Y6	0.01	0.01	0.01	0.00	0.00	0.00
Y7	-0.02	-0.02	0.00	0.01	0.00	0.00
Y8	0.00	0.00	0.01	-0.01	-0.01	-0.01
Y9	0.01	0.01	0.01	-0.02	-0.01	0.00
Y10	0.01	0.01	0.00	-0.03	-0.02	0.00
Y11	0.01	0.01	0.00	-0.02	-0.02	-0.01
Y12	0.00	0.00	0.00	-0.01	0.01	0.01
Y13	-0.02	-0.02	-0.02	0.01	0.02	-0.01
Y14	0.00	-0.01	-0.01	0.02	0.01	0.00
Y15	0.01	0.00	0.00	0.00	0.00	0.01
Y16	-0.01	-0.01	0.01	0.00	0.00	0.00
X1	-0.02	-0.02	0.04	0.14	0.07	0.00
X2	0.01	0.00	-0.01	-0.03	-0.01	0.00
X3	-0.02	0.00	0.00	0.11	0.03	0.00
X4	-0.04	-0.03	0.00	0.10	0.04	0.05



X5	0.00	-0.05	-0.06	0.00	0.04	0.01
X6	0.08	0.05	0.01	-0.02	-0.04	-0.03
X7	-0.04	-0.03	-0.04	-0.07	-0.03	0.00
X8	0.08	0.07	0.08	0.04	0.06	0.07

## Fitted Residuals

	Y7	Y8	Y9	Y10	Y11	Y12
Y7	0.00					
Y8	0.01	-0.01				
Y9	0.00	-0.01	0.00			
Y10	0.00	-0.01	0.00	0.00		
Y11	0.00	-0.01	-0.01	0.00	0.00	
Y12	-0.01	0.00	0.02	0.01	0.00	0.00
Y13	0.00	0.01	0.00	0.00	0.00	0.00
Y14	0.01	0.00	-0.01	-0.01	0.01	0.00
Y15	-0.01	0.00	0.01	0.01	0.00	-0.01
Y16	0.00	-0.01	0.00	0.00	-0.01	0.00
X1	0.02	0.01	0.01	0.00	0.03	0.05
X2	-0.01	0.00	0.00	0.00	0.00	-0.02
X3	0.02	0.00	0.00	-0.01	0.00	0.04
X4	0.06	0.03	0.01	0.00	0.00	0.05
X5	-0.02	-0.05	-0.09	-0.05	-0.01	-0.03
X6	-0.07	-0.03	0.02	0.02	-0.01	-0.03
X7	-0.04	0.00	-0.03	-0.02	0.00	-0.03
X8	0.06	0.00	0.06	0.06	0.01	0.00

## Fitted Residuals

	Y13	Y14	Y15	Y16	X1	X2
Y13	0.00					
Y14	-0.01	-0.01				
Y15	-0.01	0.00	0.00			
Y16	0.00	0.00	0.00	0.00		
X1	0.09	-0.04	0.01	0.01	0.00	
X2	-0.01	0.01	0.00	-0.01	0.00	0.00
X3	-0.03	-0.03	-0.01	0.02	0.00	0.00
X4	0.01	-0.05	0.00	0.07	0.00	0.00
X5	-0.03	0.02	-0.02	-0.01	0.00	0.00
X6	-0.01	0.02	-0.01	-0.05	-0.01	-0.01
X7	-0.04	0.02	0.00	-0.02	0.00	0.01
X8	-0.02	-0.01	-0.01	0.06	0.00	0.00

## Fitted Residuals

	X3	X4	X5	X6	X7	X8
X3	0.00					
X4	0.00	0.00				
X5	0.00	0.00	0.00			
X6	0.00	0.00	-0.01	0.00		
X7	0.00	0.00	0.00	0.00	0.00	
X8	0.01	0.00	0.00	0.00	0.00	0.00

## Summary Statistics for Fitted Residuals

Smallest Fitted Residual = -0.09  
Median Fitted Residual = 0.00  
Largest Fitted Residual = 0.14

## Stemleaf Plot

```

- 9|0
- 8|
- 7|
- 6|770
- 5|0
- 4|8865441100
- 3|951110000
- 2|98877775321000
- 1|9999999876555544443322210000

```

```

- 0|999888877777777776666666655555444444433333332222222222211111+23
0|1111111111111111122222233333334444444444455555666666666677888+07
1|000001111112244666667889
2|00234
3|1349
4|12336
5|014669
6|023579
7|377
8|36
9|8
10|
11|3
12|
13|9
    
```

Standardized Residuals

	Y1	Y2	Y3	Y4	Y5	Y6
Y1	1.82					
Y2	1.67	1.43				
Y3	0.89	0.74	0.07			
Y4	-2.44	-2.34	-1.01	0.89		
Y5	-1.33	-1.14	0.81	1.06	0.48	
Y6	1.03	1.11	1.68	-0.20	-0.67	1.62
Y7	-2.13	-2.27	-0.07	0.58	0.76	-1.49
Y8	-0.62	-0.20	1.17	-0.44	-0.94	-1.29
Y9	0.77	0.99	0.81	-1.05	-0.99	-0.02
Y10	0.89	1.11	0.58	-1.52	-1.25	-0.35
Y11	0.89	1.11	0.37	-1.07	-1.55	-0.60
Y12	0.05	-0.14	-0.10	-0.46	0.38	0.29
Y13	-1.26	-1.29	-1.30	0.60	1.11	-0.55
Y14	-0.62	-0.77	-1.02	1.62	1.17	0.02
Y15	1.20	0.88	0.44	-0.19	0.30	1.62
Y16	-1.36	-1.36	1.19	1.06	0.64	0.22
X1	-1.18	-1.42	3.06	8.45	4.63	-0.16
X2	1.44	0.00	-0.81	-2.20	-0.61	0.09
X3	-1.33	0.30	-0.30	6.47	2.13	-0.16
X4	-2.83	-2.03	0.13	5.69	2.30	3.15
X5	0.23	-2.84	-3.80	0.23	2.34	0.57
X6	6.71	4.00	0.94	-1.80	-2.76	-2.50
X7	-4.31	-3.77	-4.65	-5.53	-2.27	0.04
X8	6.03	5.43	5.91	2.72	3.44	4.75

Standardized Residuals

	Y7	Y8	Y9	Y10	Y11	Y12
Y7	-0.14					
Y8	0.58	-1.48				
Y9	-0.16	-0.82	0.25			
Y10	0.09	-0.82	-0.26	-0.46		
Y11	-0.10	-0.99	-0.90	-0.91	-0.84	
Y12	-0.51	0.46	1.20	0.92	-0.91	-0.62
Y13	0.11	1.16	-0.11	0.25	0.72	-0.13
Y14	0.71	0.50	-1.23	-0.65	1.65	0.48
Y15	-1.01	0.67	1.47	0.80	1.54	-1.00
Y16	-0.05	-0.92	0.15	-0.21	-0.69	0.08
X1	1.07	0.84	0.63	0.06	2.38	3.31
X2	-0.66	-0.32	-0.02	0.37	-0.58	-2.28
X3	1.38	0.23	-0.21	-0.67	-0.14	2.44
X4	3.37	1.80	0.54	0.04	0.12	2.70
X5	-1.03	-2.31	-4.47	-2.51	-0.72	-1.32
X6	-4.82	-2.04	1.27	1.52	-0.90	-2.00
X7	-3.20	-0.24	-2.36	-1.88	0.31	-2.09
X8	3.42	-0.12	3.77	3.86	0.97	0.15

Standardized Residuals

	Y13	Y14	Y15	Y16	X1	X2
Y13	-0.57					

Y14	-0.70	-1.43					
Y15	-1.48	0.00	-0.97				
Y16	0.13	0.33	0.12	0.58			
X1	6.46	-6.00	1.86	1.08	-0.84		
X2	-0.71	3.10	-0.80	-0.71	-0.88	0.77	
X3	-1.79	-4.32	-1.22	1.25	-0.24	-0.54	
X4	0.32	-5.23	0.68	4.19	-0.22	-0.51	
X5	-1.58	1.75	-2.63	-0.85	0.30	-0.56	
X6	-0.94	1.50	-2.60	-4.48	-0.72	-1.40	
X7	-2.97	2.93	0.59	-2.32	0.63	1.26	
X8	-1.24	-0.85	-1.70	4.32	0.33	-0.48	

## Standardized Residuals

	X3	X4	X5	X6	X7	X8
X3	0.11					
X4	0.17	0.23				
X5	0.28	-0.13	-1.17			
X6	-0.46	-0.23	-1.29	-0.75		
X7	-0.10	0.21	0.64	0.53	-0.01	
X8	0.83	-0.06	-0.76	-1.06	0.28	-1.38

## Summary Statistics for Standardized Residuals

Smallest Standardized Residual = -6.00  
Median Standardized Residual = -0.06  
Largest Standardized Residual = 8.45

## Stemleaf Plot

```

- 6|0
- 5|52
- 4|875533
- 3|8820
- 2|88866554433333211000
- 1|98876555544444333333322222111100000000
- 0|99999998888888877777776666666555554333222222211111111+11
0|111111111111222222233333333444455555666666677778888888999999
1|0001111111222222333444555666777889
2|13344779
3|112344489
4|02368
5|479
6|0557
7|
8|4

```

## Largest Negative Standardized Residuals

Residual for X1 and Y14 -6.00  
Residual for X3 and Y14 -4.32  
Residual for X4 and Y1 -2.83  
Residual for X4 and Y14 -5.23  
Residual for X5 and Y2 -2.84  
Residual for X5 and Y3 -3.80  
Residual for X5 and Y9 -4.47  
Residual for X5 and Y15 -2.63  
Residual for X6 and Y5 -2.76  
Residual for X6 and Y7 -4.82  
Residual for X6 and Y15 -2.60  
Residual for X6 and Y16 -4.48  
Residual for X7 and Y1 -4.31  
Residual for X7 and Y2 -3.77  
Residual for X7 and Y3 -4.65  
Residual for X7 and Y4 -5.53  
Residual for X7 and Y7 -3.20  
Residual for X7 and Y13 -2.97

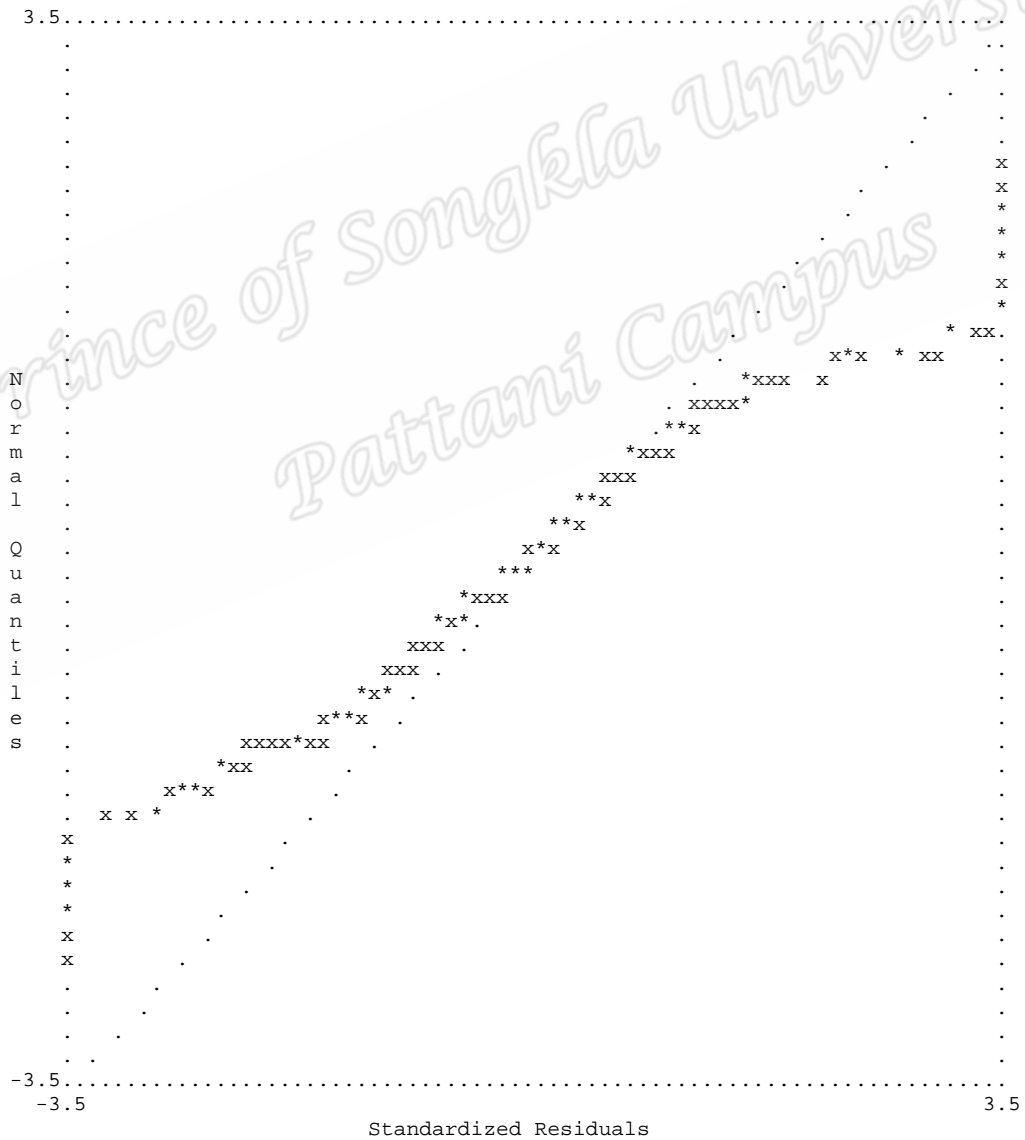
## Largest Positive Standardized Residuals

Residual for X1 and Y3 3.06  
Residual for X1 and Y4 8.45  
Residual for X1 and Y5 4.63  
Residual for X1 and Y12 3.31  
Residual for X1 and Y13 6.46  
Residual for X2 and Y14 3.10

Residual for	X3 and	Y4	6.47
Residual for	X4 and	Y4	5.69
Residual for	X4 and	Y6	3.15
Residual for	X4 and	Y7	3.37
Residual for	X4 and	Y12	2.70
Residual for	X4 and	Y16	4.19
Residual for	X6 and	Y1	6.71
Residual for	X6 and	Y2	4.00
Residual for	X7 and	Y14	2.93
Residual for	X8 and	Y1	6.03
Residual for	X8 and	Y2	5.43
Residual for	X8 and	Y3	5.91
Residual for	X8 and	Y4	2.72
Residual for	X8 and	Y5	3.44
Residual for	X8 and	Y6	4.75
Residual for	X8 and	Y7	3.42
Residual for	X8 and	Y9	3.77
Residual for	X8 and	Y10	3.86
Residual for	X8 and	Y16	4.32

TI new path

Qplot of Standardized Residuals



TI new path

## Modification Indices and Expected Change

## Modification Indices for LAMBDA-Y

	aut	standmor	sit	bch
	-----	-----	-----	-----
Y1	--	--	--	--
Y2	--	--	--	--
Y3	--	--	0.05	0.40
Y4	--	--	0.17	0.71
Y5	0.04	--	0.06	--
Y6	0.23	--	0.21	--
Y7	0.71	--	--	--
Y8	--	--	--	--
Y9	--	--	--	--
Y10	0.04	--	--	--
Y11	0.79	0.29	--	--
Y12	0.00	0.19	--	--
Y13	1.05	0.38	--	--
Y14	0.01	--	--	--
Y15	--	--	0.02	--
Y16	0.58	--	0.18	--

## Expected Change for LAMBDA-Y

	aut	standmor	sit	bch
	-----	-----	-----	-----
Y1	--	--	--	--
Y2	--	--	--	--
Y3	--	--	0.03	-0.04
Y4	--	--	-0.04	0.05
Y5	0.00	--	-0.03	--
Y6	0.00	--	-0.05	--
Y7	-0.01	--	--	--
Y8	--	--	--	--
Y9	--	--	--	--
Y10	0.00	--	--	--
Y11	0.03	-0.09	--	--
Y12	0.00	0.06	--	--
Y13	-0.02	-0.11	--	--
Y14	0.00	--	--	--
Y15	--	--	0.03	--
Y16	0.00	--	0.03	--

## Standardized Expected Change for LAMBDA-Y

	aut	standmor	sit	bch
	-----	-----	-----	-----
Y1	--	--	--	--
Y2	--	--	--	--
Y3	--	--	0.03	-0.13
Y4	--	--	-0.05	0.14
Y5	0.01	--	-0.04	--
Y6	-0.02	--	-0.06	--
Y7	-0.03	--	--	--
Y8	--	--	--	--
Y9	--	--	--	--
Y10	-0.02	--	--	--
Y11	0.14	-0.03	--	--
Y12	-0.01	0.02	--	--
Y13	-0.09	-0.03	--	--
Y14	0.01	--	--	--
Y15	--	--	0.04	--
Y16	0.02	--	0.04	--

## Completely Standardized Expected Change for LAMBDA-Y

	aut	standmor	sit	bch
	-----	-----	-----	-----
Y1	--	--	--	--
Y2	--	--	--	--
Y3	--	--	0.03	-0.13

Y4	- -	- -	-0.05	0.14
Y5	0.01	- -	-0.04	- -
Y6	-0.02	- -	-0.06	- -
Y7	-0.03	- -	- -	- -
Y8	- -	- -	- -	- -
Y9	- -	- -	- -	- -
Y10	-0.02	- -	- -	- -
Y11	0.14	-0.03	- -	- -
Y12	-0.01	0.02	- -	- -
Y13	-0.09	-0.03	- -	- -
Y14	0.01	- -	- -	- -
Y15	- -	- -	0.04	- -
Y16	0.02	- -	0.04	- -

## Modification Indices for LAMBDA-X

	lead	pro
	-----	-----
X1	- -	- -
X2	- -	- -
X3	- -	- -
X4	- -	- -
X5	- -	- -
X6	0.03	- -
X7	0.01	- -
X8	- -	- -

## Expected Change for LAMBDA-X

	lead	pro
	-----	-----
X1	- -	- -
X2	- -	- -
X3	- -	- -
X4	- -	- -
X5	- -	- -
X6	-0.01	- -
X7	0.00	- -
X8	- -	- -

## Standardized Expected Change for LAMBDA-X

	lead	pro
	-----	-----
X1	- -	- -
X2	- -	- -
X3	- -	- -
X4	- -	- -
X5	- -	- -
X6	-0.01	- -
X7	0.01	- -
X8	- -	- -

## Completely Standardized Expected Change for LAMBDA-X

	lead	pro
	-----	-----
X1	- -	- -
X2	- -	- -
X3	- -	- -
X4	- -	- -
X5	- -	- -
X6	-0.01	- -
X7	0.01	- -
X8	- -	- -

## Modification Indices for BETA

	aut	standmor	sit	bch
	-----	-----	-----	-----
aut	- -	0.28	- -	0.28
standmor	0.51	- -	0.19	0.86
sit	- -	0.28	- -	- -

bch        - -                - -                - -                - -

Expected Change for BETA

	aut	standmor	sit	bch
aut	- -	-0.59	- -	0.64
standmor	0.02	- -	-0.03	0.10
sit	- -	-0.12	- -	- -
bch	- -	- -	- -	- -

Standardized Expected Change for BETA

	aut	standmor	sit	bch
aut	- -	-0.46	- -	0.05
standmor	0.02	- -	-0.08	0.13
sit	- -	-0.37	- -	- -
bch	- -	- -	- -	- -

Modification Indices for GAMMA

	lead	pro
aut	- -	- -
standmor	0.40	- -
sit	- -	0.28
bch	- -	- -

Expected Change for GAMMA

	lead	pro
aut	- -	- -
standmor	0.03	- -
sit	- -	7.21
bch	- -	- -

Standardized Expected Change for GAMMA

	lead	pro
aut	- -	- -
standmor	0.19	- -
sit	- -	0.18
bch	- -	- -

No Non-Zero Modification Indices for PHI

Modification Indices for PSI

	aut	standmor	sit	bch
aut	- -	- -	- -	- -
standmor	0.28	- -	- -	- -
sit	- -	0.28	- -	- -
bch	- -	- -	- -	- -

Expected Change for PSI

	aut	standmor	sit	bch
aut	- -	- -	- -	- -
standmor	-0.03	- -	- -	- -
sit	- -	-0.01	- -	- -
bch	- -	- -	- -	- -

Standardized Expected Change for PSI

	aut	standmor	sit	bch
aut	- -	- -	- -	- -
standmor	-0.02	- -	- -	- -

sit        - -        -0.02        - -  
 bch        - -        - -        - -        - -

## Modification Indices for THETA-EPS

	Y1	Y2	Y3	Y4	Y5	Y6
Y1	- -					
Y2	- -	- -				
Y3	- -	- -	- -			
Y4	- -	- -	1.67	- -		
Y5	- -	- -	0.78	- -	- -	
Y6	- -	- -	1.41	- -	- -	- -
Y7	- -	- -	1.18	0.77	0.08	- -
Y8	- -	- -	- -	0.00	0.16	- -
Y9	- -	- -	- -	0.25	- -	0.34
Y10	- -	- -	- -	0.68	0.23	0.36
Y11	- -	- -	- -	0.18	0.40	0.01
Y12	- -	- -	- -	- -	0.15	0.03
Y13	- -	- -	0.42	- -	0.68	0.85
Y14	- -	- -	0.00	- -	- -	- -
Y15	- -	- -	2.17	- -	0.01	0.75
Y16	- -	- -	1.62	0.24	0.09	- -

## Modification Indices for THETA-EPS

	Y7	Y8	Y9	Y10	Y11	Y12
Y7	- -					
Y8	1.49	- -				
Y9	- -	- -	- -			
Y10	0.08	- -	- -	- -		
Y11	1.33	- -	0.88	- -	- -	
Y12	1.17	- -	0.77	0.26	0.60	- -
Y13	- -	0.02	0.00	- -	0.33	- -
Y14	0.83	- -	1.48	0.26	0.90	- -
Y15	0.05	- -	- -	0.10	- -	- -
Y16	- -	1.61	0.20	- -	0.35	0.19

## Modification Indices for THETA-EPS

	Y13	Y14	Y15	Y16
Y13	- -			
Y14	0.13	- -		
Y15	0.03	- -	- -	
Y16	0.32	0.46	0.11	- -

## Expected Change for THETA-EPS

	Y1	Y2	Y3	Y4	Y5	Y6
Y1	- -					
Y2	- -	- -				
Y3	- -	- -	- -			
Y4	- -	- -	-0.02	- -		
Y5	- -	- -	0.01	- -	- -	
Y6	- -	- -	-0.01	- -	- -	- -
Y7	- -	- -	-0.01	0.01	0.00	- -
Y8	- -	- -	- -	0.00	0.01	- -
Y9	- -	- -	- -	-0.01	- -	-0.01
Y10	- -	- -	- -	-0.01	-0.01	0.01
Y11	- -	- -	- -	0.01	-0.01	0.00
Y12	- -	- -	- -	- -	0.01	0.00
Y13	- -	- -	-0.01	- -	0.01	-0.01
Y14	- -	- -	0.00	- -	- -	- -
Y15	- -	- -	0.05	- -	0.00	0.00
Y16	- -	- -	0.01	0.00	0.00	- -

## Expected Change for THETA-EPS

	Y7	Y8	Y9	Y10	Y11	Y12
--	----	----	----	-----	-----	-----



Y7	- -						
Y8	0.01	- -					
Y9	- -	- -	- -				
Y10	0.00	- -	- -	- -			
Y11	0.01	- -	-0.02	- -	- -		
Y12	-0.01	- -	0.02	0.01	-0.02	- -	
Y13	- -	-0.01	0.00	- -	0.01	- -	
Y14	0.00	- -	-0.01	0.00	0.01	- -	
Y15	0.00	- -	- -	0.00	- -	- -	
Y16	- -	-0.01	0.00	- -	0.00	0.00	

## Expected Change for THETA-EPS

	Y13	Y14	Y15	Y16
Y13	- -			
Y14	-0.01	- -		
Y15	0.00	- -	- -	
Y16	0.00	0.00	0.00	- -

## Completely Standardized Expected Change for THETA-EPS

	Y1	Y2	Y3	Y4	Y5	Y6
Y1	- -					
Y2	- -	- -				
Y3	- -	- -	- -			
Y4	- -	- -	-0.02	- -		
Y5	- -	- -	0.01	- -	- -	
Y6	- -	- -	-0.01	- -	- -	- -
Y7	- -	- -	-0.01	0.01	0.00	- -
Y8	- -	- -	- -	0.00	0.01	- -
Y9	- -	- -	- -	-0.01	- -	-0.01
Y10	- -	- -	- -	-0.01	-0.01	0.01
Y11	- -	- -	- -	0.01	-0.01	0.00
Y12	- -	- -	- -	- -	0.01	0.00
Y13	- -	- -	-0.01	- -	0.01	-0.01
Y14	- -	- -	0.00	- -	- -	- -
Y15	- -	- -	0.05	- -	0.00	0.00
Y16	- -	- -	0.01	0.00	0.00	- -

## Completely Standardized Expected Change for THETA-EPS

	Y7	Y8	Y9	Y10	Y11	Y12
Y7	- -					
Y8	0.01	- -				
Y9	- -	- -	- -			
Y10	0.00	- -	- -	- -		
Y11	0.01	- -	-0.02	- -	- -	
Y12	-0.01	- -	0.02	0.01	-0.02	- -
Y13	- -	-0.01	0.00	- -	0.01	- -
Y14	0.00	- -	-0.01	0.00	0.01	- -
Y15	0.00	- -	- -	0.00	- -	- -
Y16	- -	-0.01	0.00	- -	0.00	0.00

## Completely Standardized Expected Change for THETA-EPS

	Y13	Y14	Y15	Y16
Y13	- -			
Y14	-0.01	- -		
Y15	0.00	- -	- -	
Y16	0.00	0.00	0.00	- -

## Modification Indices for THETA-DELTA-EPS

	Y1	Y2	Y3	Y4	Y5	Y6
X1	0.29	2.31	16.99	22.50	3.74	0.13
X2	2.59	0.01	5.37	37.14	1.79	1.35
X3	3.12	7.08	1.77	13.22	1.71	5.42
X4	3.70	0.42	0.03	0.99	8.34	1.42

X5	8.88	4.65	8.51	0.03	16.83	11.20
X6	20.35	4.26	0.00	0.76	5.26	0.76
X7	19.10	2.68	2.27	11.45	1.03	8.31
X8	0.48	1.70	12.67	2.16	0.20	2.50

## Modification Indices for THETA-DELTA-EPS

	Y7	Y8	Y9	Y10	Y11	Y12
X1	0.19	1.55	0.00	11.98	8.41	8.88
X2	0.27	0.38	4.33	4.48	5.45	0.00
X3	0.33	3.24	0.00	2.55	0.80	9.43
X4	2.90	0.23	0.02	0.71	5.04	3.23
X5	3.73	0.15	10.62	2.66	2.10	0.24
X6	0.80	0.49	3.61	2.68	1.81	1.69
X7	0.11	9.03	0.00	7.02	7.81	0.02
X8	0.05	8.96	0.16	9.10	0.59	0.00

## Modification Indices for THETA-DELTA-EPS

	Y13	Y14	Y15	Y16
X1	41.98	32.23	5.73	1.03
X2	3.82	17.33	8.62	0.45
X3	19.61	4.71	0.74	2.48
X4	0.18	1.59	0.08	7.32
X5	0.55	0.21	0.17	8.93
X6	0.58	4.81	0.15	0.06
X7	0.52	0.87	10.85	2.37
X8	1.14	0.88	22.24	2.79

## Expected Change for THETA-DELTA-EPS

	Y1	Y2	Y3	Y4	Y5	Y6
X1	0.00	-0.01	0.03	0.05	0.02	0.00
X2	0.01	0.00	-0.02	-0.07	-0.01	0.01
X3	-0.02	0.02	-0.01	0.05	-0.01	-0.01
X4	-0.02	0.01	0.00	0.01	-0.03	-0.01
X5	0.03	-0.02	-0.03	0.00	0.05	0.02
X6	0.04	-0.02	0.00	0.01	-0.02	0.00
X7	-0.04	0.01	-0.01	-0.04	0.01	0.01
X8	-0.01	0.01	0.04	0.02	0.00	-0.01

## Expected Change for THETA-DELTA-EPS

	Y7	Y8	Y9	Y10	Y11	Y12
X1	0.00	0.01	0.00	-0.03	0.03	-0.03
X2	0.00	0.01	0.02	0.02	-0.02	0.00
X3	0.00	-0.02	0.00	0.02	-0.01	0.04
X4	-0.01	0.01	0.00	0.01	-0.02	0.02
X5	0.01	0.00	-0.04	-0.02	0.02	-0.01
X6	0.00	-0.01	0.02	0.01	-0.01	-0.01
X7	0.00	0.03	0.00	-0.02	0.03	0.00
X8	0.00	-0.03	0.00	0.03	-0.01	0.00

## Expected Change for THETA-DELTA-EPS

	Y13	Y14	Y15	Y16
X1	0.07	-0.08	-0.01	0.00
X2	-0.02	0.07	0.02	0.00
X3	-0.06	0.03	-0.01	0.00
X4	-0.01	-0.01	0.00	0.01
X5	0.01	0.01	0.00	-0.01
X6	0.01	0.01	0.00	0.00
X7	-0.01	-0.01	0.03	0.00
X8	-0.01	-0.01	-0.04	0.00

## Completely Standardized Expected Change for THETA-DELTA-EPS

	Y1	Y2	Y3	Y4	Y5	Y6
--	----	----	----	----	----	----

	-----	-----	-----	-----	-----	-----
X1	0.00	-0.01	0.03	0.05	0.02	0.00
X2	0.01	0.00	-0.02	-0.07	-0.01	0.01
X3	-0.02	0.02	-0.01	0.05	-0.01	-0.01
X4	-0.02	0.01	0.00	0.01	-0.03	-0.01
X5	0.03	-0.02	-0.03	0.00	0.05	0.02
X6	0.04	-0.02	0.00	0.01	-0.02	0.00
X7	-0.04	0.01	-0.01	-0.04	0.01	0.01
X8	-0.01	0.01	0.04	0.02	0.00	-0.01

## Completely Standardized Expected Change for THETA-DELTA-EPS

	-----	-----	-----	-----	-----	-----
	Y7	Y8	Y9	Y10	Y11	Y12
X1	0.00	0.01	0.00	-0.03	0.03	-0.03
X2	0.00	0.01	0.02	0.02	-0.02	0.00
X3	0.00	-0.02	0.00	0.02	-0.01	0.04
X4	-0.01	0.01	0.00	0.01	-0.02	0.02
X5	0.01	0.00	-0.04	-0.02	0.02	-0.01
X6	0.00	-0.01	0.02	0.01	-0.01	-0.01
X7	0.00	0.03	0.00	-0.02	0.03	0.00
X8	0.00	-0.03	0.00	0.03	-0.01	0.00

## Completely Standardized Expected Change for THETA-DELTA-EPS

	-----	-----	-----	-----
	Y13	Y14	Y15	Y16
X1	0.07	-0.08	-0.01	0.00
X2	-0.02	0.07	0.02	0.00
X3	-0.06	0.03	-0.01	0.00
X4	-0.01	-0.01	0.00	0.01
X5	0.01	0.01	0.00	-0.01
X6	0.01	0.01	0.00	0.00
X7	-0.01	-0.01	0.03	0.00
X8	-0.01	-0.01	-0.04	0.00

## Modification Indices for THETA-DELTA

	-----	-----	-----	-----	-----	-----
	X1	X2	X3	X4	X5	X6
X1	--	--	--	--	--	--
X2	--	--	--	--	--	--
X3	--	0.02	--	--	--	--
X4	--	0.11	--	--	--	--
X5	0.45	--	--	--	--	--
X6	0.01	2.45	0.14	0.00	--	--
X7	--	1.27	--	--	0.57	--
X8	0.06	--	0.80	0.09	--	0.34

## Modification Indices for THETA-DELTA

	-----	-----
	X7	X8
X7	--	--
X8	--	--

## Expected Change for THETA-DELTA

	-----	-----	-----	-----	-----	-----
	X1	X2	X3	X4	X5	X6
X1	--	--	--	--	--	--
X2	--	--	--	--	--	--
X3	--	0.00	--	--	--	--
X4	--	0.00	--	--	--	--
X5	0.01	--	--	--	--	--
X6	0.00	-0.01	0.00	0.00	--	--
X7	--	0.01	--	--	0.01	--
X8	0.00	--	0.01	0.00	--	-0.01

## Expected Change for THETA-DELTA

	-----	-----
	X7	X8

X7 - -  
X8 - - - -

Completely Standardized Expected Change for THETA-DELTA

	X1	X2	X3	X4	X5	X6
X1	- -					
X2	- -	- -				
X3	- -	0.00	- -			
X4	- -	0.00	- -	- -		
X5	0.01	- -	- -	- -	- -	
X6	0.00	-0.01	0.00	0.00	- -	- -
X7	- -	0.01	- -	- -	0.01	- -
X8	0.00	- -	0.01	0.00	- -	-0.01

Completely Standardized Expected Change for THETA-DELTA

	X7	X8
X7	- -	
X8	- -	- -

Maximum Modification Index is 41.98 for Element ( 1,13) of THETA DELTA-EPSILON

TI new path

Factor Scores Regressions

ETA

	Y1	Y2	Y3	Y4	Y5	Y6
aut	2.37	1.90	-3.18	0.93	0.03	0.06
standmor	-0.02	0.15	-0.06	0.00	0.06	0.81
sit	-0.59	-0.70	0.79	-0.19	0.04	-0.63
bch	-1.10	-1.41	1.57	-0.44	0.01	-1.52

ETA

	Y7	Y8	Y9	Y10	Y11	Y12
aut	0.26	0.20	0.65	-2.23	0.79	0.45
standmor	0.42	0.19	-0.09	-0.04	-0.05	-0.02
sit	-0.35	-0.03	0.29	0.30	0.51	0.13
bch	-0.73	-0.14	0.56	0.64	1.00	0.24

ETA

	Y13	Y14	Y15	Y16	X1	X2
aut	-0.23	2.52	10.94	0.49	-1.24	-0.68
standmor	0.02	-0.27	0.05	-1.01	0.01	0.24
sit	0.02	0.18	-0.79	0.69	0.19	-0.16
bch	0.00	-0.02	-1.98	1.39	0.56	0.65

ETA

	X3	X4	X5	X6	X7	X8
aut	-0.55	-0.44	0.36	-2.05	-4.13	-1.33
standmor	0.07	0.01	0.01	-0.06	-0.07	-0.04
sit	0.01	0.06	-0.07	0.40	0.76	0.26
bch	0.35	0.21	-0.14	0.81	1.70	0.53

KSI

	Y1	Y2	Y3	Y4	Y5	Y6
lead	0.05	-0.02	-0.15	0.23	0.02	-0.76
pro	0.00	0.00	0.00	0.00	0.00	0.00

KSI

	Y7	Y8	Y9	Y10	Y11	Y12
lead	-0.65	-0.20	0.11	-0.08	-0.13	0.04
pro	0.00	0.00	0.00	0.00	0.00	0.00

KSI

	Y13	Y14	Y15	Y16	X1	X2
lead	0.04	1.40	0.92	1.80	-0.10	-0.92
pro	0.00	0.00	0.00	0.00	0.00	0.00

KSI

	X3	X4	X5	X6	X7	X8
lead	-0.29	-0.06	-0.03	0.14	0.10	0.08
pro	0.00	0.00	0.00	0.01	0.01	0.00

TI new path

Standardized Solution

LAMBDA-Y

	aut	standmor	sit	bch
Y1	3.00	-	-	-2.42
Y2	3.16	-	-	-2.60
Y3	0.72	0.19	-	-
Y4	0.59	0.27	-	-
Y5	-	0.52	-	0.48
Y6	-	0.93	-	0.22
Y7	-	0.73	0.21	0.11
Y8	0.05	0.34	1.19	-0.70
Y9	0.43	0.29	1.21	-1.11
Y10	-	0.14	1.55	-0.82
Y11	-	-	2.49	-1.66
Y12	-	-	1.83	-1.09
Y13	-	-	0.37	0.43
Y14	-	0.08	-2.10	2.87
Y15	1.40	-0.06	-	-0.38
Y16	-	0.74	-	0.40

LAMBDA-X

	lead	pro
X1	1.50	-0.68
X2	1.80	-0.96
X3	1.37	-0.57
X4	0.84	0.00
X5	0.78	0.03
X6	-	0.94
X7	-	0.96
X8	0.26	0.63

BETA

	aut	standmor	sit	bch
aut	-	-	-	-
standmor	-	-	-	-
sit	0.80	-	-	-
bch	-0.33	-0.08	0.75	-

GAMMA

	lead	pro
aut	0.97	-
standmor	-	0.55

sit	0.12	- -
bch	1.11	-0.50

## Correlation Matrix of ETA and KSI

	aut	standmor	sit	bch	lead	pro
aut	1.00					
standmor	0.51	1.00				
sit	0.91	0.47	1.00			
bch	0.93	0.42	0.98	1.00		
lead	0.97	0.53	0.89	0.95	1.00	
pro	0.92	0.55	0.85	0.85	0.95	1.00

## PSI

Note: This matrix is diagonal.

	aut	standmor	sit	bch
	0.07	0.70	0.17	-0.03

## Regression Matrix ETA on KSI (Standardized)

	lead	pro
aut	0.97	- -
standmor	- -	0.55
sit	0.89	- -
bch	1.46	-0.54

## TI new path

## Completely Standardized Solution

## LAMBDA-Y

	aut	standmor	sit	bch
Y1	3.03	- -	- -	-2.44
Y2	3.19	- -	- -	-2.62
Y3	0.72	0.19	- -	- -
Y4	0.59	0.27	- -	- -
Y5	- -	0.52	- -	0.48
Y6	- -	0.93	- -	0.22
Y7	- -	0.73	0.21	0.11
Y8	0.05	0.34	1.18	-0.70
Y9	0.43	0.29	1.21	-1.11
Y10	- -	0.14	1.54	-0.82
Y11	- -	- -	2.49	-1.66
Y12	- -	- -	1.82	-1.09
Y13	- -	- -	0.37	0.43
Y14	- -	0.08	-2.10	2.86
Y15	1.40	-0.06	- -	-0.38
Y16	- -	0.74	- -	0.40

## LAMBDA-X

	lead	pro
X1	1.49	-0.68
X2	1.80	-0.96
X3	1.37	-0.57
X4	0.84	0.00
X5	0.78	0.03
X6	- -	0.94
X7	- -	0.96
X8	0.26	0.63

## BETA

	aut	standmor	sit	bch
aut	- -	- -	- -	- -

standmor	- -	- -	- -	- -
sit	0.80	- -	- -	- -
bch	-0.33	-0.08	0.75	- -

## GAMMA

	lead	pro
aut	0.97	- -
standmor	- -	0.55
sit	0.12	- -
bch	1.11	-0.50

## Correlation Matrix of ETA and KSI

	aut	standmor	sit	bch	lead	pro
aut	1.00					
standmor	0.51	1.00				
sit	0.91	0.47	1.00			
bch	0.93	0.42	0.98	1.00		
lead	0.97	0.53	0.89	0.95	1.00	
pro	0.92	0.55	0.85	0.85	0.95	1.00

## PSI

Note: This matrix is diagonal.

	aut	standmor	sit	bch
	0.07	0.70	0.17	-0.03

## THETA-EPS

	Y1	Y2	Y3	Y4	Y5	Y6
Y1	-0.35					
Y2	-0.50	-0.46				
Y3	0.05	0.05	0.31			
Y4	-0.15	-0.16	- -	0.42		
Y5	0.05	0.01	- -	0.14	0.28	
Y6	-0.02	-0.06	- -	-0.06	-0.08	-0.08
Y7	-0.01	-0.01	- -	- -	- -	-0.09
Y8	0.15	0.14	-0.10	- -	- -	-0.11
Y9	0.15	0.17	0.05	- -	-0.05	- -
Y10	0.35	0.31	0.06	- -	- -	- -
Y11	0.30	0.29	-0.05	- -	- -	- -
Y12	0.23	0.23	0.00	0.07	- -	- -
Y13	0.17	0.17	- -	0.03	- -	- -
Y14	0.07	0.07	- -	-0.08	-0.02	0.05
Y15	-0.31	-0.32	- -	-0.04	- -	- -
Y16	0.01	0.00	- -	- -	- -	-0.06

## THETA-EPS

	Y7	Y8	Y9	Y10	Y11	Y12
Y7	0.15					
Y8	- -	0.38				
Y9	-0.02	0.05	0.44			
Y10	- -	0.11	0.16	0.30		
Y11	- -	0.06	- -	0.06	0.16	
Y12	- -	0.00	- -	- -	- -	0.39
Y13	0.01	- -	- -	0.02	- -	0.14
Y14	- -	0.02	- -	- -	- -	-0.04
Y15	- -	-0.05	-0.08	- -	-0.04	-0.02
Y16	0.06	- -	- -	0.01	- -	- -

## THETA-EPS

	Y13	Y14	Y15	Y16
Y13	0.36			
Y14	- -	0.15		

Y15	--	-0.03	-0.04		
Y16	--	--	--	0.04	

## THETA-DELTA

	X1	X2	X3	X4	X5	X6
X1	0.24					
X2	0.06	0.14				
X3	0.06	--	0.28			
X4	0.06	--	0.09	0.29		
X5	--	0.04	0.05	0.07	0.35	
X6	--	--	--	--	0.05	0.12
X7	-0.06	--	-0.02	-0.02	--	-0.04
X8	--	0.02	--	--	0.05	--

## THETA-DELTA

	X7	X8
X7	0.08	
X8	-0.04	0.21

## Regression Matrix ETA on KSI (Standardized)

	lead	pro
aut	0.97	--
standmor	--	0.55
sit	0.89	--
bch	1.46	-0.54

TI new path

Total and Indirect Effects

## Total Effects of KSI on ETA

	lead	pro
aut	3.04 (0.87) 3.49	--
standmor	--	5.04 (19.10) 0.26
sit	0.71 (0.26) 2.80	--
bch	2.80 (0.53) 5.32	-52.17 (203.35) -0.26

## Indirect Effects of KSI on ETA

	lead	pro
aut	--	--
standmor	--	--
sit	0.62 (0.34) 1.84	--
bch	0.67 (0.52) 1.28	-4.06 (15.54) -0.26



## Total Effects of ETA on ETA

	aut	standmor	sit	bch
aut	- -	- -	- -	- -
standmor	- -	- -	- -	- -
sit	0.20 (0.07) 3.00	- -	- -	- -
bch	0.16 (0.18) 0.93	-0.81 (0.23) -3.56	1.78 (0.38) 4.68	- -

Largest Eigenvalue of B\*B' (Stability Index) is 3.841

## Indirect Effects of ETA on ETA

	aut	standmor	sit	bch
aut	- -	- -	- -	- -
standmor	- -	- -	- -	- -
sit	- -	- -	- -	- -
bch	0.36 (0.16) 2.32	- -	- -	- -

## Total Effects of ETA on Y

	aut	standmor	sit	bch
Y1	0.50 (0.15) 3.28	0.68 (0.19) 3.62	-1.50 (0.31) -4.78	-0.84 (0.12) -7.22
Y2	0.52 (0.16) 3.28	0.73 (0.20) 3.66	-1.61 (0.33) -4.89	-0.91 (0.12) -7.68
Y3	0.15 (0.04) 4.08	0.69 (0.14) 4.88	- -	- -
Y4	0.12 (0.03) 4.00	1.00	- -	- -
Y5	0.03 (0.02) 1.12	1.80 (0.23) 7.90	0.30 (0.07) 4.00	0.17 (0.05) 3.70
Y6	0.01 (0.01) 1.02	3.36 (0.57) 5.88	0.14 (0.06) 2.39	0.08 (0.03) 2.44
Y7	0.04 (0.02) 2.01	2.68 (0.44) 6.10	0.24 (0.07) 3.48	0.04 (0.05) 0.82
Y8	0.17 (0.05) 3.39	1.45 (0.24) 6.08	0.55 (0.19) 2.83	-0.25 (0.09) -2.66
Y9	0.23 (0.06)	1.38 (0.23)	0.31 (0.14)	-0.39 (0.09)

	3.88	6.02	2.29	-4.25
Y10	0.21 (0.06) 3.61	0.75 (0.16) 4.80	0.77 (0.23) 3.33	-0.29 (0.08) -3.58
Y11	0.33 (0.09) 3.58	0.47 (0.13) 3.65	1.04 (0.33) 3.15	-0.58 (0.10) -5.76
Y12	0.25 (0.07) 3.51	0.31 (0.10) 3.21	0.84 (0.26) 3.17	-0.38 (0.09) -4.33
Y13	0.09 (0.03) 2.52	-0.12 (0.06) -1.86	0.58 (0.18) 3.14	0.15 (0.06) 2.32
Y14	-0.19 (0.07) -2.88	-0.51 (0.08) -6.04	0.03 (0.07) 0.43	1.00
Y15	0.27 (0.07) 3.67	-0.10 (0.06) -1.55	-0.24 (0.12) -1.98	-0.13 (0.07) -2.04
Y16	0.02 (0.02) 1.10	2.64 (0.42) 6.21	0.25 (0.07) 3.60	0.14 (0.04) 3.46

## Indirect Effects of ETA on Y

	aut	standmor	sit	bch
Y1	-0.14 (0.15) -0.94	0.68 (0.19) 3.62	-1.50 (0.31) -4.78	- -
Y2	-0.15 (0.16) -0.94	0.73 (0.20) 3.66	-1.61 (0.33) -4.89	- -
Y3	- -	- -	- -	- -
Y4	- -	- -	- -	- -
Y5	0.03 (0.02) 1.12	-0.14 (0.06) -2.40	0.30 (0.07) 4.00	- -
Y6	0.01 (0.01) 1.02	-0.06 (0.03) -2.13	0.14 (0.06) 2.39	- -
Y7	0.04 (0.02) 2.01	-0.03 (0.04) -0.78	0.07 (0.08) 0.88	- -
Y8	0.16 (0.05) 3.52	0.20 (0.08) 2.42	-0.44 (0.18) -2.48	- -
Y9	0.14 (0.04) 3.31	0.31 (0.11) 2.94	-0.69 (0.14) -5.04	- -
Y10	0.21 (0.06) 3.61	0.23 (0.08) 2.94	-0.51 (0.14) -3.55	- -
Y11	0.33 (0.09)	0.47 (0.13)	-1.03 (0.23)	- -

	3.58	3.65	-4.40	
Y12	0.25 (0.07)	0.31 (0.10)	-0.68 (0.18)	- -
	3.51	3.21	-3.68	
Y13	0.09 (0.03)	-0.12 (0.06)	0.27 (0.14)	- -
	2.52	-1.86	1.93	
Y14	-0.19 (0.07)	-0.81 (0.23)	1.78 (0.38)	- -
	-2.88	-3.56	4.68	
Y15	-0.02 (0.03)	0.11 (0.06)	-0.24 (0.12)	- -
	-0.84	1.87	-1.98	
Y16	0.02 (0.02)	-0.11 (0.05)	0.25 (0.07)	- -
	1.10	-2.44	3.60	

## Total Effects of KSI on Y

	lead	pro
	-----	-----
Y1	-0.42 (0.09)	43.95 (168.41)
	-4.79	0.26
Y2	-0.49 (0.09)	47.25 (181.24)
	-5.48	0.26
Y3	0.46 (0.05)	3.50 (13.22)
	8.52	0.26
Y4	0.38 (0.05)	5.04 (19.10)
	7.61	0.26
Y5	0.47 (0.07)	0.99 (4.27)
	6.71	0.23
Y6	0.21 (0.08)	13.24 (50.02)
	2.84	0.26
Y7	0.23 (0.08)	11.60 (44.12)
	3.02	0.26
Y8	0.05 (0.09)	19.11 (72.89)
	0.61	0.26
Y9	-0.09 (0.09)	25.60 (98.00)
	-1.03	0.26
Y10	0.11 (0.08)	17.58 (67.15)
	1.39	0.26
Y11	-0.14 (0.09)	30.18 (115.77)
	-1.57	0.26
Y12	0.02 (0.09)	19.85 (76.07)

	0.20	0.26
Y13	0.64 (0.08)	-7.85 (31.57)
	8.50	-0.25
Y14	1.55 (0.09)	-50.66 (197.54)
	16.53	-0.26
Y15	0.53 (0.05)	5.93 (21.46)
	11.16	0.28
Y16	0.39 (0.07)	6.64 (24.80)
	5.39	0.27

TI new path

Standardized Total and Indirect Effects

Standardized Total Effects of KSI on ETA

	lead	pro
aut	0.97	-
standmor	-	0.55
sit	0.89	-
bch	1.46	-0.54

Standardized Indirect Effects of KSI on ETA

	lead	pro
aut	-	-
standmor	-	-
sit	0.77	-
bch	0.35	-0.04

Standardized Total Effects of ETA on ETA

	aut	standmor	sit	bch
aut	-	-	-	-
standmor	-	-	-	-
sit	0.80	-	-	-
bch	0.27	-0.08	0.75	-

Standardized Indirect Effects of ETA on ETA

	aut	standmor	sit	bch
aut	-	-	-	-
standmor	-	-	-	-
sit	-	-	-	-
bch	0.60	-	-	-

Standardized Total Effects of ETA on Y

	aut	standmor	sit	bch
Y1	2.34	0.18	-1.80	-2.42
Y2	2.46	0.20	-1.94	-2.60
Y3	0.72	0.19	-	-
Y4	0.59	0.27	-	-
Y5	0.13	0.49	0.36	0.48
Y6	0.06	0.91	0.16	0.22
Y7	0.20	0.72	0.29	0.11
Y8	0.81	0.39	0.66	-0.70
Y9	1.09	0.37	0.38	-1.11
Y10	1.01	0.20	0.93	-0.82

Y11	1.54	0.13	1.25	-1.66
Y12	1.16	0.08	1.01	-1.09
Y13	0.41	-0.03	0.69	0.43
Y14	-0.90	-0.14	0.04	2.87
Y15	1.29	-0.03	-0.29	-0.38
Y16	0.11	0.71	0.30	0.40

## Completely Standardized Total Effects of ETA on Y

	aut	standmor	sit	bch
	-----	-----	-----	-----
Y1	2.37	0.19	-1.82	-2.44
Y2	2.48	0.20	-1.96	-2.62
Y3	0.72	0.19	-	-
Y4	0.59	0.27	-	-
Y5	0.13	0.49	0.36	0.48
Y6	0.06	0.91	0.16	0.22
Y7	0.20	0.72	0.29	0.11
Y8	0.81	0.39	0.66	-0.70
Y9	1.09	0.37	0.38	-1.11
Y10	1.01	0.20	0.93	-0.82
Y11	1.54	0.13	1.25	-1.66
Y12	1.16	0.08	1.01	-1.09
Y13	0.41	-0.03	0.69	0.43
Y14	-0.90	-0.14	0.04	2.86
Y15	1.29	-0.03	-0.29	-0.38
Y16	0.11	0.71	0.30	0.40

## Standardized Indirect Effects of ETA on Y

	aut	standmor	sit	bch
	-----	-----	-----	-----
Y1	-0.65	0.18	-1.80	-
Y2	-0.70	0.20	-1.94	-
Y3	-	-	-	-
Y4	-	-	-	-
Y5	0.13	-0.04	0.36	-
Y6	0.06	-0.02	0.16	-
Y7	0.20	-0.01	0.09	-
Y8	0.76	0.05	-0.52	-
Y9	0.66	0.08	-0.83	-
Y10	1.01	0.06	-0.61	-
Y11	1.54	0.13	-1.24	-
Y12	1.16	0.08	-0.81	-
Y13	0.41	-0.03	0.32	-
Y14	-0.90	-0.22	2.14	-
Y15	-0.10	0.03	-0.29	-
Y16	0.11	-0.03	0.30	-

## Completely Standardized Indirect Effects of ETA on Y

	aut	standmor	sit	bch
	-----	-----	-----	-----
Y1	-0.66	0.19	-1.82	-
Y2	-0.71	0.20	-1.96	-
Y3	-	-	-	-
Y4	-	-	-	-
Y5	0.13	-0.04	0.36	-
Y6	0.06	-0.02	0.16	-
Y7	0.20	-0.01	0.09	-
Y8	0.75	0.05	-0.52	-
Y9	0.66	0.08	-0.83	-
Y10	1.01	0.06	-0.61	-
Y11	1.54	0.13	-1.24	-
Y12	1.16	0.08	-0.81	-
Y13	0.41	-0.03	0.32	-
Y14	-0.90	-0.22	2.13	-
Y15	-0.10	0.03	-0.29	-
Y16	0.11	-0.03	0.30	-

## Standardized Total Effects of KSI on Y

lead                      pro

	-----	-----
Y1	-0.63	1.30
Y2	-0.74	1.40
Y3	0.69	0.10
Y4	0.57	0.15
Y5	0.70	0.03
Y6	0.32	0.39
Y7	0.35	0.34
Y8	0.08	0.56
Y9	-0.14	0.76
Y10	0.17	0.52
Y11	-0.21	0.89
Y12	0.03	0.59
Y13	0.96	-0.23
Y14	2.32	-1.50
Y15	0.79	0.18
Y16	0.58	0.20

Completely Standardized Total Effects of KSI on Y

	lead	pro
	-----	-----
Y1	-0.64	1.31
Y2	-0.75	1.41
Y3	0.69	0.10
Y4	0.57	0.15
Y5	0.70	0.03
Y6	0.32	0.39
Y7	0.35	0.34
Y8	0.08	0.56
Y9	-0.14	0.76
Y10	0.17	0.52
Y11	-0.21	0.89
Y12	0.03	0.59
Y13	0.96	-0.23
Y14	2.31	-1.49
Y15	0.79	0.17
Y16	0.58	0.20

Time used: 3.031 Seconds